

AVIATION

APRIL 24, 1922

Issued Weekly

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A Glimpse of Modern Naval Warfare

VOLUME XII
Number 17

SPECIAL FEATURES

NAVAL AIR APPROPRIATION, 1922-23
MILITARY CONSERVATISM
THE USES OF AIRPLANE CARRIERS
FULL SCALE SEAPLANE COEFFICIENTS

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APRIL 24, 1922

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VOL. XII, NO. 17

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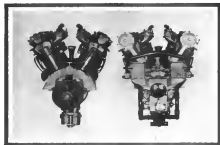
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APRIL 24, 1932

No. 17

Another Safety Demonstration

AEROMARINE AIRWAYS, America's oldest and principal air transport enterprise, in their second annual report of flying operations submitted to the Steel Bureau of Aeronautics can point with justified pride to the fact that not a single passenger or employee was injured during the 3,717 separate flights made by their flying boats, representing a total of 265,535 passenger-miles. This record, when placed alongside that made during the preceding ten-month period, which was equally devoid of casualties of any kind, is the best demonstration of the safety which can be achieved in modern air transport by an airworthy material and a capable personnel.

New means of transportation in all the history of human progress have led to fights to uproot hostile national public prejudices born of ignorance and fear. The railroad, the automobile, the airplane, the automobile, have all known a period in the history of their development when the public considered it as an extremely hazardous enterprise to ride in them. The airplane has not fully escaped from this period yet, a large section of the public is favorably inclined toward the flying machine yet the doubting Thomases are still numerous.

It is for this reason that demonstrations of the best equipped in the "Think Test Fleet" constitute a very valuable sight lesson—both to the public and to the aeronautical world. A record of safe flying, unbroken repeatedly, must be imposed on the public with the fact that air transport is slowly but surely growing into the fabric of modern civilization; at the same time it is a reminder to those engaged in aviation that safety can be achieved only through the co-operation which exists on land and at sea in certain operations.

Problems in Seaplane Design

SOME interesting points regarding the design of seaplanes was raised by W. D. MURPHY in a lecture delivered before the Institute of Aeronautical Engineers of London. The lecturer first pointed out that in the matter of hull design the flexible hull, developed from jacking practice, appeared superior to the rigid hull, for the former absorbed the landing shocks far better. However, the flexible (Latham type) hull involved some serious constructional difficulties, for a required flexible hullskins, and this question had not yet been satisfactorily solved. The importance of having not only watertight hullskins but also a double bottom was brought out by the lecturer, and also the desirability of providing the wing tip floats with hullskins, as a protection of these floats would not put them out of commission.

Then Mr. MURPHY stressed the importance of designing flying boat hulls which would be really watertight, and which could be moved out for long periods, instead of having to be hoisted up on the dolly every night, as is now generally the case. This latter practice the lecturer considered "undesirable"

as far more damage was inflicted upon hullskins while they were hoisted ashore than when they were afloat.

Regarding the wing structure Mr. MURPHY was of the opinion that there was wanted a type of stiff fitting which would not require the presence of holes in the fabric, as the water enters such holes and runs the wind or corrodes the metal of the wing structure. He also dwelt upon the disadvantages exposed wooden struts presented owing to their being subject to warping under the combined action of humidity and other heat. Steel was free from such trouble, but had the drawback of being subject to corrosion. With regard to the lattice, Mr. MURPHY called attention to the fact that corrosion did not occur alone from the action of air and salt water, but that it was also due to different metals being in free contact or in non-homogeneous alloys, in which case corrosion occurred much more rapidly than in the case of simple metals. The possibility of using stainless steel was mentioned.

In the discussion which followed the interesting suggestion was made to build docking hangers into which seaplanes would be normally floated for overhauls of the superstructure while for an overhaul of the hull the ship would be pumped dry. This solution, he believed, will become an absolute necessity with the gradual increase in size of the flying boats.

The Sport Seaplane

MUCH interest is being shown at present in France in the question of the sport seaplane, judging by the numerous articles and letters which appear in the columns of our French contemporaries.

Most aerial sportsmen are agreed that the ideal sport seaplane would be one involving the lowest possible weight and furnishing the highest possible performance for a relatively low horsepower. But when it comes to a practical solution of the problem there is no unanimity. One school of thought suggests the "monocoque seaplane" represented in France by the Avions De Poissy—and in this country by the Mousquetaire biplane—while the other asks for a small and handy two-seater, such as the Sport Parmeur or the Sport Mousquetaire, not to speak of larger types. The chief complaint seems to be the lack of a low-powered, economical and sturdy engine, and in this subject opinion are divided between air-cooled and water-cooled types of radial, vertical and V type. But whatever the desires of the owner, or the prospective one, there appears to be a genuine demand for a cheap sport seaplane with a cargo of about 200 miles.

In this matter we seriously seem to be further advanced in the design of a satisfactory sport seaplane. The "Mousquetaire" biplane, designed by the Ingenieur Division, Air Service, is for instance an excellent example of high performance with reasonable construction, and the Leveaux engine with which it is fitted has given ample proof of both its reliability, simplicity and low fuel consumption.

By CORNELL LAMAR Editor
Pittsfield, Mass.

The Naval Air Appropriation, 1922-23

Bill Reported by House Committee Only Provides \$7,866,500
As Against \$17,000,000 Estimate Approved by the President

The Navy appropriation bill for the fiscal year 1922-23 reported on April 8, carries the sum of \$7,866,500, which is \$11,000,000 less than the amount voted for by the Senate. The bill, which was introduced by the Secretary of the Navy and the Bureau of Budget, and transmitted to Congress with the approval of the President. The appropriation of \$7,866,500 approved for by the Secretary of the Navy was itself a reduction of \$3,000,000 from the estimate submitted by the Chief of the Bureau of Aeronautics.

Provision of the Bill

While new construction is not authorized in the bill reported, it is believed that provision may later be made "for aircraft and accessories in course of construction or manufacture on June 30, 1922," in an act which would be passed.

For aeronautical, photographic, development, land and maintenance equipment, including repair thereof, for use with aircraft built on buildings on June 30, 1922, \$400,000 is provided. For maintenance and repair and operation of the Aircraft Factory, including plant, air stations, test stations, testing laboratories and for overhauling of planes, \$1,000,000 is authorized, including \$400,000 for equipment of engine with catapults, and for conducting and developing research work on all types of aircraft, \$1,116,850 is stipulated. For drafting, electrical apparatus and messenger service at stations, \$710,000 is authorized. This goes, in total of \$2,000,000 and the money so specified for aircraft shall be disbursed and accounted for in accordance with existing laws and the bill directs.

The bill provides that the Secretary of the Navy is authorized to adjust and amend the estimate of money he may draw on claims for damages which have or may now or in future properly growing out of operations of naval aircraft, where the claims do not exceed \$500.

It is further provided that no part of the appropriation shall be expended for the maintenance of more than six observation air stations on the coasts of the continental United States, that an amount appropriated shall be paid for the construction of a factory.

The sum of \$50,000 is designated for pay of employees in the Bureau of Aeronautics, provided that no one is paid at a rate of compensation in excess of \$100 per month, except the Chief Clerk, at \$2500, and three clerks at \$2000 each. Pay districts and related services as now directed necessary \$65,000 is specified.

Only 34 Per Cent of Total Appropriation

The total amount reported in the Committee for Aeronautics, \$7,866,500, is only 34 per cent of the total amount appropriated. The Committee that appropriated the sum of \$7,866,500 will be needed for new aircraft and \$500,000 for construction work at aircraft stations, and adds that if Congress should appropriate these additional sums that the total amount for the coming year would amount to \$15,740,115. This would be 65 per cent of the total Naval Appropriation. The total amount recommended by the Secretary of the Navy and the Bureau of the Budget, and transmitted to Congress with the approval of the President was \$15,666,000, which would be less than the estimate of \$17,000,000 as a result of the bombing experiments, the Joint Army and Navy Board reported.

Armed and Ordnance experiments conducted with German vessels as targets have proved that it has become imperative as a matter of national defense to provide for the necessary possible development of aviation for both the Army and the Navy.

This report was approved by both the Secretary of War and Navy. The total amount—\$17,000,000—asked for is

adequate, and unless a larger amount than the Committee proposes is appropriated, Naval Aviation will be inadequately equipped during the coming fiscal year.

Revised Committee

A detailed comment on the provisions of the bill reported by the Committee follows:

In the report accompanying the House of Representatives bill No. 11239, on June 11 under the title "Aircraft," the Committee states that the sum proposed "exceeds the amount appropriated for the present fiscal year for the same purpose by \$3,000,000." This statement is incorrect and does not reflect any provision as to the money proposed for Aeronautics. Actually the money reported by the Committee under its subhead is \$8,000,000 less than was appropriated for the subhead during the fiscal year 1922. Furthermore the expenditure for maintenance in 1922 was entirely inadequate for that purpose, and in spite of the closing of aviation schools and the curbing of non-aviation activities, the expenditures for maintenance during the fiscal year 1921 will exceed the amount appropriated by approximately \$400,000. It is thus seen that the amount reported by the Committee is approximately \$3,000,000 less than the actual amount which is being spent in 1922 for this purpose.

The Committee, when it drafts its report that the amount reported in the bill exceeds the amount appropriated for the present fiscal year for the same purpose by \$3,000,000, the fact that in the bill reported to the Committee, the Bureau of Aeronautics assumes the payment of \$500,000 for civil, engineering, messenger and drafting service involved under appropriations at other bureaus. Corresponding reductions have been made in the appropriations of these other bureaus, and the money directed has been added to the Aviation appropriation. In other words, there are approximately \$500,000 more than was appropriated for the fiscal year 1922, and \$500,000 should, for this reason, be deducted from the \$8,000,000 increase reported by the Committee.

The Provision for Catapults

In addition, the Committee under maintenance has included \$400,000 for the construction of catapults. These catapults are provided as they should be located on land, on the surface of ships. However, as no money was appropriated for this purpose in 1921, \$400,000 could be deducted from maintenance in making comparisons with 1922.

Actually, therefore, the Committee has included \$500,000 which was appropriated for last year under other bureaus and has included under maintenance an additional obligation for the Bureau of Aeronautics of \$500,000 which is not one of the purposes appropriated for under the bill reported this year. There is then in the total proposed by the Committee an actual reduction of \$36,451 from the amount appropriated in 1921.

The failure of the bill as reported to the Committee which is inadequate, is the appropriation under the subhead for Maintenance and Operation. The sum reported by the Committee is \$3,770,000 of which \$1,000,000 is to be spent for the construction of catapults, leaving \$2,770,000 for operations and maintenance. Operations and maintenance charges during 1921 are shown, comparing at this time with the Aviation funds provided under the bill reported by the Committee, of \$1,015,100 from the figure collected by the Secretary of the Navy and appearing in the Budget, and is wholly inadequate.

Obstacle for Equipment

It is pointed out that the prospect of having Naval Aviation largely independent as this is the condition today, and the fact that the Government is being forced to a great extent by the use of surplus war stocks. Little of this

April 24, 1922

stock will be available in 1923 or it is becoming exhausted and obsolete, and even the amount of money appropriated for maintenance is, according, as before operations will have to be further curtailed and the production of broken equipment. Furthermore in 1922 the First, in a preliminary estimate of the appropriation for fuel, has been inactive a great part of the time, thus reducing the need of requirements of operation of aircraft. In 1923 sufficient money should be provided to permit service to commence the First during all its operations and gas can not be done on any lesser sum than the \$10,000,000 indicated to Congress by the Secretary of the Navy and appearing in the Budget.

If the present Naval appropriation bill carrying \$7,866,500 actual sum is passed, the Bureau of Navigation states that only 2545 tons could be assigned to aviation duty. As there are required for each Naval Aviation ship over 1000 tons, this means that four naval aviation forces will necessarily be cut in half. The present allocation of credited ton in Naval aviation is 1000, which is not an adequate force to carry on present aviation activities, it is said.

M. I. T. Builds Glider

With the final plans drawn up and most of the needed material already on hand the Aeronautical Engineering Society of the Massachusetts Institute of Technology is waiting only for the beginning of the third term before starting actual construction work on its experimental glider.

Glider Exceptionally Light

Designed along more or less conventional lines, one of the outstanding features of the glider which the Aero Society is



Machine lighter in view from the air

working on will be in its beginning of construction. According to the plans, the glider will be obtained by the replicating of practically all metal fittings by plywood and construction and gliding as far as is possible with all bulky structural members. This will be done, however, without the sacrifice of strength.

The machine will be of the monoplane type with overhead

wing construction. A derrick from general practice will be used in building the machine in three sections as to indicate the size of each section, thus adding to the ease of construction, the portability and facility in maintenance. The necessary landing gear and wheels will be replaced by skis, and the tail wheel will be made of rubber wheels which is exceedingly light.

Can Standard Fly Section

Some of the foreign gliders were built without the usual number of control surfaces, however in this case, for the sake of positive maneuverability, the designers are using the three surface control, namely, elevator, rudder and ailerons. A standard wing section, the Martin Kay B, which gives a high lift, will be used. This combined with the lightness of construction will give a total structural weight estimated at less than 30 lb., and with a wing span of 20 ft. and wing area of 140 sq. ft., and a top speed of 70 mph. The overall length will be 32 ft.

Drawings for the glider were submitted by five members of the Aero Society and the one considered most suitable by the Aeronautical Engineering Department was drawn up by D. C. Kappes '22, and C. T. Allen '22. The glider was then constructed, the most desirable features of the various plans were incorporated as far as was possible in the final design. The other students who have worked drawings in the design of the various structural members and approved by Prof. E. P. Warner, who is acting merely in an advisory capacity to the team engaged in the work.

May Fly at Framingham

Probably all the students to be used in the construction have already flown on the First, in which the glider will be employed in the work, which will be done by the members of the Aero Society during what ever spare time they can find. The actual tests will probably be carried out at Framingham or at some other point where a suitable site is available. Though a number of methods of putting the glider into the air are under consideration, none have as yet been definitely decided upon. It is also possible that the glider will be used for the progress of the plans this year.

The officers of the society hope to be able to carry out the actual tests before the end of the school year. If the formation of the glider comes up to the expectations of its designers, another one will probably be built next year in which various inventory refinements will be made, it is expected with the first machine will date.

A Letter

Editor, AVIATION:

In the issue of Feb. 6, 1922, of your publication you printed under "Foreign News" a note by F. S. Voss signed Edmund R. Montgomery, at Birmingham, Alabama, concerning an airplane, which note in several parts does not correspond to reality.

First, we do not get any directly from the California government, or the contrary, we have been informed by the government \$800 for every 15 acres of land suited by our plans.

Second, our employees, of which we have six at the moment, are not paid with 500 hp. engines, but only with a 180 hp. B.M. 30, the maximum horsepower being on the order of \$50,000. The one with which a new world's duration record was recently established in the United States.

Third, the flight from Birmingham to Genoa, the proposed one, will be made in the summer of 1923. From Genoa the route is carried by train to Rome in 10 hr.

Fourth, the machine flying weekly to Cartagena leaves the same day. The machine will leave on its route at \$50,000 (Columbian). The annual payments to the interior is 30 cents for every 15 acres.

Our agent in New York is not Vantage Curran & Co., but Dan Gerhardt, New York, 44 Whitehall St.

SEYMOUR COHEN—ALGERIA DE TRANSPORTS AERIEUX
BOCA, Colombia

New 2nd Assistant Postmaster General

Dr. Col. Paul Henderson, of Chicago, whose nomination as 2d Assistant Postmaster General was sent to the Senate by President Harding on April 4, will have charge of the Air, Railway, Foreign, Alaska, Shipping and Naval Mail divisions. Mr. Henderson, named to succeed G. H. Klumpheuser, who died from injuries received in the Kitchener-Hoover Theater disaster, is a native of Chicago and an engineer by profession, but is considered an expert on transportation. He is the son-in-law of Representative Mullan of Illinois, having married Miss Mabel Madden of Chicago.

At present Mr. Henderson is one of the officers of the Deere and Engstrom Co., a mail-order chain corporation, and has been associated with the Western Union Co., of Chicago, for several years. He also served with the Ohio Navy Works at Lansing, Mich., when he was associated with Howard Coffin of the Aircraft Production Board and a member of the committee which developed the Liberator motor during the war. Later on Mr. Henderson became president of the Western Union Co. and managed all matters connected with the business of the firm.

In 1917 Mr. Henderson resigned from this company to enter the Army, where he was commissioned a Captain in the Ordnance Department on Oct. 3, 1917, and promoted to a Major on Feb. 9, 1918. Part of his service was in France where he was on duty at the port of St. Nazaire. An ordinance officer he was charged with handling a large part of the freight, ammunition, etc. for the A. E. F. He was promoted through that port. He was awarded a certificate of merit in his commanding General and in March, 1923, was discharged into the Ordnance Reserve in a Major to rank from April 30, 1918, and appointed a Lieutenant in Jan. 8, 1925. Since leaving the Army Mr. Henderson has been treasurer of the Andrews Engineering Co., of Chicago, engaged in the manufacture of large spraying machinery.

Mr. Henderson is thirty-seven years of age, and has three children. In Chicago he is a member of the Hamilton Club and is said to be very popular in a wide circle of friends and acquaintances in that city. Although he has never served as the Postal Service in any capacity, nor the Air Service, his wide experience in transportation work, engineering and business in general is believed to have equipped him well for the duties of his new office, which includes the operation of the Air Mail and Radio Service of the Post Office Department.

Surplus Army and Navy Aircraft

Surplus airplanes, engines and flying accessories no longer needed by the Army and Navy are being placed on the market for commercial and private purchase. A recent survey of Navy flying equipment has resulted in offering for sale aircraft planes ranging in price from \$200 to \$1,600 each. Some of these are new, while others are used, and a few are without engines, but generally they are being sold at less than 30 per cent of their cost, which is very little.

Cost prices are not shown in a new Navy catalog, but last year's catalog showed in some instances that the selling price was one-third of the cost. Last year the Navy disposed of 67 planes, the total price for which was not available.

Army planes and engines have been sold by sealed bids at five to ten per cent of their original cost. Last year out of an estimated total of surplus airplanes, engines and parts, of \$12,535,257, \$20,885,667 was disposed of with a return of about ten per cent. Over nine million dollars worth of planes and spares was transferred to other government branches, and one million dollars worth was pressed and sent to the Air Service.

On April 1, bids were called for on 390 Standard J5 planes located at Houston, Texas, and recently bids were asked for on 200 Curtiss J4H4 training planes located at Earlfield. Two hundred Curtiss OX trainers at Millington, Tenn., have also been put on the market.

The Army recently sold 1300 Hall-Scott motors and 800 auto engines. The Curtiss catalog has announced the sale of 2000 of their training planes for about \$2,000,000 for the remodeling. It is reported.

The Italian Type SCA1 Airship

On February 15, last, the smallest aerogled airship of the world was christened in Rome. This ship, called the SCA1, was built by the Stalderbach and Cusumano Aerostatic for the Spanish Army, and earlier ship of the same type was to be completed.

The principal characteristics and dimensions of the SCA1 are the following:

Length over all	129 ft.
Height over all	28 ft.
Weight	43 P. 8 lb.
Capacity	21,000 cu. ft.
Power plant	2 40 hp. Anzani
Capacity	5,000 cu. ft.
Travel with	2,000 ft.
Disposable lift	1,200 ft.
Equipment	16 lb.
Crew	200 lb.
Load	300 lb.
Fuel and oil	400 lb.

Consumption per hr. (1 engine)	33 lb.
Maximum speed (two engines)	56 m.p.h.
Cruising speed (one engine)	32 m.p.h.
Range (at maximum speed)	500 m.p.h.
Range (at cruising speed)	600 m.p.h.
Service ceiling	6,000 ft.

The ship possesses a very good performance for its size and cost, and its disposable lift is very satisfactory.



The Italian envelope SCA1, built for the Spanish army—the smallest aerogled in the world.

considering the weight of a rigid airship under the envelope. Only a few years ago for the same kind of service it would have been necessary to have about 50,000 cu. ft. with a moored envelope, and then the speed would have been much lower. The model accommodates a crew of two and also two or three passengers.

International Aircraft Co.

A new aircraft corporation known as the International Aircraft Co. of Kansas City, Mo., has just been formed. The company has taken in the plant and facilities of Valentine Goughart, Inc., of 115 Frank Creek Road, Kansas City.

The officers of the new company are: E. H. Hawley, president; Valentine Goughart, vice president and general manager; Francis D. Ross, treasurer; Cyrus Smith, secretary. In addition to building airplanes, propellers and engines and handling spares, the company will furnish outstanding engineering service.



The Curtiss "Golden Eagle" racing airplane, which first landed in its spot at National Flying Meet at Curtiss Field, Wheaton, Ill., on April 30.

National Flying Meet, April 30

More than thirty airplanes have already been entered in the first of the season flying meet sponsored by the Aero Club of America and the Aeronautical Chamber of Commerce, which will be held at Curtiss Field, Garden City, L. I., N. Y., Sunday, April 30.

The Rotary Club of New York is sponsoring the event, which is designed to show the progress made in the development of American commercial aircraft during the last six months. The Rotarians will have a special section reserved for them and their friends.

Many new types will be shown at the various exhibitions and contests, which include cross, speed trials, parachute jumping, efficiency and performance tests and passenger carrying. It is the first of a series of such flights to be held throughout the United States this year, to demonstrate to the business and professional public the peculiar qualities of the flying machine in speed and economy operation.

Spokane News

Raymond Smith and George Stenbinder of Lewiston, Idaho, are negotiating for an airplane of 150 hp. as soon as all major lines Lewiston and Driggsville is the characteristic built on the middle lock of "Golden Eagle" for the government, and of business who desire to visit that place region. The distance between Lewiston and the town is about 100 miles, and the plane will be used for the purpose of carrying seven days of oil to the lock and park middle.

To negotiate the trip planes will require to attain a height of 10,000 ft. on leaving Driggsville, for in case of trouble the plane will return to Driggsville or Driggs in the event.

By a contract signed up with the Curtiss Aeroplane & Motor Corp. (the United States Aircraft Co. of Spokane) an authorized agent of the Curtiss firm, and entitled to sell ships throughout the Northwest, according to arrangements made by C. H. Messer, head of the local concern.

"We will immediately put in a complete stock of parts for Curtiss ships and motors, as well as carrying the stock of Standard ship parts as we do at present," Mr. Messer said. "This will give us the agency for ships and parts for the entire Northwest. We will carry complete parts for every ship now flying in the district. We will specialize in giving quick service on airplane parts and supplies, as well as in carrying on general flying business."

Western Airway Service

California started the first regularly scheduled commercial flying service in the country on Sunday, March 28, when six airplanes of the Air Mail of the Western Airway Co. took off from the Marine Plaza field in San Francisco. The service is now being maintained between San Francisco and Los Angeles on the schedule of two regular trips a day, with a 450-mile day fare.

Flying time between the two terminals, at which of which fields have been established, is approximately 5 hr., with stops at San Jose and Santa Maria for rest and lunch. Eight airplanes will serve the service, carrying either two or four passengers in addition to the pilot, and leaving the Marine Plaza field at 8:30 and 10:30 a.m. each in the morning. In the evening are included two American H.R. flying boats. The first flight, on March 28, was more in the nature of a demonstration with several notables of the state and newspaper reporters.

The Western Airway Co., which is offering the service to the public, is the outgrowth of the Thompson Aircraft Co., which recently closed its third year of operation. During this time the company has established a record of no accidents during the entire three years. The pilots of the fleet are all men of long flying experience, each with over a thousand flying hours on his record.

Continued operation of the company is in the hands of Paul H. Hensley in California (traveler). Foster Curry, mail carrier manager of Camp Curry, at the Yosemite National Park, is actively connected with the direction, and his associate, William B. Curtis, will be resident manager in Los Angeles. J. E. Thompson is business manager, and his brother, R. S. Thompson, a firm of long experience and for two years a United States Army flying instructor, will have charge of pilots, ships and equipment.

Grover C. Loening Operated On

Grover C. Loening, president of the Loening Aeronautical Engineering Corp., was recently operated on for appendicitis at the Kitchener-Hoover Hospital by Doctor D. W. Martin, Chief Surgeon of St. Luke's Hospital.

The attack was very sudden, but the operation was entirely successful. Mr. Loening has now left the hospital and is expected to be back at his work in a week or ten days.

Foreign News

Argentina—Consul General W. Henry Robertson, Buenos Aires, states that the new flying ground and school acquired by the Argentine Aerial Club at San Isidro, alongside the grounds of the River Plate Aviation Co., have been opened for use, more than twenty machines taking part in the ceremony.

Belgium—The Aero Club of Belgium has organized an international competition for touring airplanes to be held at Brussels on June 23-25, 1922. The competition is open to touring machines, single-seaters or multi-seaters, whose engine capacity does not exceed 7 liters. The awards will be made for a total of 100 points, allotted as follows: 30 points for minimum space occupied in hangar; 30 points for general economy of the engine; 25 points for slow landing; and 15 points for quick get-off.

The prizes are as follows: The King of Belgium's Challenge Cup, to be retained by the winner for one year; and the following cash prizes: 1st prize, 15,000 francs; 2nd prize, 7,000 francs; and third prize, 3,000 francs.

Colombia—According to Edmund B. Montgomery, American Vice Consul at Barranquilla, Colombia offers an opportunity for the establishment of an air transport service.

As the river steamship transportation is uncertain in the dry season, which is now coming on, an air service with machines carrying ten to fourteen passengers would undoubtedly get all the passengers and freight that could be carried, although one drawback to large air boats on the river is the danger from contact with driftwood in starting and landing. The ratification of the American-Colombian treaty should be a help in any negotiations which may have for an end the establishment of such seaplane service on the Magdalena River by American interests in cooperation with Colombians.

France—It is reported that the prize of one million francs offered for the best aero engine will probably be augmented by another million, offered by the French Air Minister, for engines of 350 to 450 hp., and weighing not more than 2 lb./hp. It is understood that competing engines will have to pass a reliability run of 240 hr., in stretches of 8 hr. each, and that the total time taken in completing the 240 hr. must not exceed 100 days. The competition will start on March 1, 1923, and entries must be received before Dec. 1, 1923.

Announcement has been made that the Aviation Committee of the Colonial Exhibition have definitely decided to organize a contest for seaplanes from April 17 to 19, under three classes: under 150 hp.; 150 to 400 hp.; and over 400 hp. Eliminator trials are to take place on April 17, when entered aircraft must ascend to 1000 m. and have on board, in addition to the normal useful load, sufficient fuel for 1½ hr. flight. The course, Marseille-Monaco, is 413 kilometers. Prizes to the extent of over 40,000 francs are offered.

Italy—To establish more rapid communications between Italy and Tripoli, the Secretary of the Colonies, Hon. Girardini, is endeavoring to organize an aerial mail service from Rome to Tripoli that may eventually be used also for the transportation of passengers. For this purpose the Superior Command of Aeronautics has granted the use of the airship *Esperia* (ex-Bodensee) to make its first flight, which will take place in the coming Spring. In the meantime, while they are completing certain works in order to prepare the airplane for her flight, her commandant, Major Valle, will go to Tripoli personally to make sure of a safe landing.

Palestine—The Palestine General Post Office has just announced the inauguration of a fortnightly mail service by airplane from Palestine to Mesopotamia, according to a report received by the Department of Commerce from Consul Southard at Jerusalem. There has been a military service over this route for some time, from Cairo via Palestine and Transjordan. This announcement merely opens the service to the public.

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